

Notice of Allowability

Application No.

10/025,904

Examiner

Timothy L Rude

Applicant(s)

BANG ET AL

Art Unit

2883

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to after final amendment filed 23 December 2004.
2. ☒ The allowed claim(s) is/are 2,3,7-10 and 17-20.
3. ☒ The drawings filed on 26 December 2001 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

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DETAILED ACTION

Claims

1. Claims 2 and 3 are amended. Claims 1, 4-6, and 11-16 are canceled.

Allowable Subject Matter

Claims 2, 3, 7-10, and 17-20 are allowed.

The following is an examiner's statement of reasons for allowance:

Claim 2 is allowable over the prior art of record because the latter, either alone or in combination, does not disclose nor render obvious a liquid crystal display panel as claimed comprising: a panel wherein a first gate line among the gate lines has a greater width than widths of the other gate lines so as to allow the pixel regions in the peripheral portion to obtain an aperture ratio lower than that of the pixel regions in the other portions.

The closest references are Shimada et al (Shimada) USPAT 5,877,830 and/or Sono et al (Sono) USPAT 5,513,028.

Shimada discloses (Title, Abstract, entire patent) a liquid crystal display (LCD) panel comprising:
a first substrate provided with a plurality of gate, 2, and data, 8, lines, the gate lines being arranged to cross the data lines to define a plurality of pixel regions in a matrix

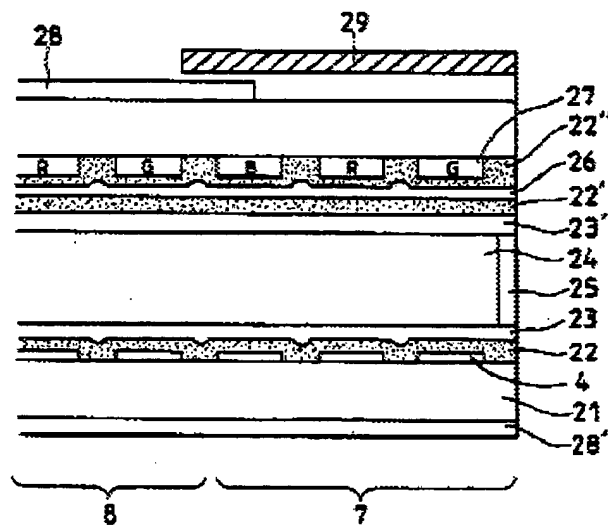
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arrangement; a second substrate provided with a black matrix layer (col. 5, lines 50-60) to shield portions other than the pixel regions from light; and liquid crystal layer injected between the first and second substrates, wherein the pixel regions in a peripheral portion of the matrix arrangement have an aperture ratio lower than that of the pixel regions in other portions of the matrix arrangement (col. 2, lines 29-42 and col. 6, lines 35-45) in the example where the black matrix overlaps the pixel electrodes, 11.

a first substrate provided with a plurality of gate and data lines, the gate lines being arranged to cross the data lines to define a plurality of pixel regions in a matrix

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arrangement; a second substrate provided with a shield plate, 29 (Applicant's black matrix layer), to shield portions other than the pixel regions from light; and liquid crystal layer injected between the first and second substrates, wherein the pixel regions in a peripheral portion of the matrix arrangement have an aperture ratio lower than that of the pixel regions in other portions of the matrix arrangement due to shielding.

FIG. 5

However, Shimada and/or Sono do not render obvious a panel wherein a first gate line among the gate lines has a greater width than widths of the other gate lines so as to allow the pixel regions in the peripheral portion to obtain an aperture ratio lower than that of the pixel regions in the other portions.

Claim 3 is allowable over the prior art of record because the latter, either alone or in combination, does not disclose nor render obvious a liquid crystal display panel as claimed comprising: a panel wherein a first data line or a last data line among the data lines has a greater width than widths of the other data lines so as to allow the pixel regions in the peripheral portion to obtain an aperture ratio lower than that of the pixel regions in the other portions.

The closest references are Shimada and/or Sono as presented above.

However, Shimada and/or Sono do not render obvious a panel wherein a first data line or a last data line among the data lines has a greater width than widths of the other data lines so as to allow the pixel regions in the peripheral portion to obtain an aperture ratio lower than that of the pixel regions in the other portions.

Claim 7 is allowable over the prior art of record because the latter, either alone or in combination, does not disclose nor render obvious a liquid crystal display panel as claimed comprising: a panel wherein the pixel electrodes at a peripheral portion of the matrix arrangement are narrower than the pixel electrodes at other portions of the matrix arrangement.

The closest reference is Shimada, wherein the pixel regions in a peripheral portion of the matrix arrangement have an aperture ratio lower than that of the pixel regions in other portions of the matrix arrangement in the example where the black matrix overlaps the pixel electrodes. However, Shimada does not render obvious a

panel wherein the pixel electrodes at a peripheral portion of the matrix arrangement are narrower than the pixel electrodes at other portions of the matrix arrangement.

Claim 17 is allowable over the prior art of record because the latter, either alone or in combination, does not disclose nor render obvious a liquid crystal display panel as claimed comprising: a width of a first gate line among the gate lines is greater than widths of other gate lines, width of one of a first data line and a last data line among the data lines is greater than widths of other data lines, and width of portions the black matrix pattern corresponding to one of the first gate line, the first data line and the last data line is greater than widths of portions of the black matrix pattern not corresponding to the one of the first gate line, the first data line, and the last data line.

The closest reference is Shimada, wherein the pixel regions in a peripheral portion of the matrix arrangement have an aperture ratio lower than that of the pixel regions in other portions of the matrix arrangement in the example where the black matrix overlaps the pixel electrodes. However, Shimada does not render obvious a width of a first gate line among the gate lines is greater than widths of other gate lines, width of one of a first data line and a last data line among the data lines is greater than widths of other data lines, and width of portions the black matrix pattern corresponding to one of the first gate line, the first data line and the last data line is greater than widths of portions of the black matrix pattern not corresponding to the one of the first gate line, the first data line, and the last data line.

Claims 8-10 and 18-20 are allowable because they directly or indirectly depend from claims with allowable subject matter above.

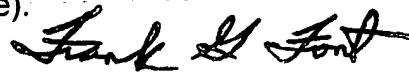
Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy L Rude whose telephone number is (571) 272-2301. The examiner can normally be reached on Monday through Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank Font can be reached on (571) 272-2415. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Timothy L Rude
Examiner
Art Unit 2883



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